

In re Patent Application for:  
**GUINEA**  
Serial No. **Not yet assigned**  
Filing date: **Herewith**

---

AI (13) A switching circuit comprising:  
at least one circuit for receiving a plurality of  
input clock signals delayed relative to one another and at  
least one control signal and outputting a new signal from  
among the plurality of input clock signals based upon the at  
least one control signal, the new signal being advanced or  
delayed relative to a current signal from among the plurality  
of input signals currently being output;

said at least one circuit outputting the new signal  
synchronously with a transition of the new signal and before  
disabling the current signal to substantially prevent the  
production of false signals during switching.

14. The switching circuit according to Claim 13  
wherein said at least one circuit comprises a plurality of  
circuits each receiving a respective one of the plurality of  
input clock signals and selectively outputting its respective  
input clock signal as the new signal.

15. The switching circuit according to Claim 14  
wherein (said plurality of circuits) are connected in a ring;  
and wherein each of (said plurality of circuits) provides a  
respective disabling signal upon being selected to adjacent  
circuits in the ring to disable said adjacent circuits.

16. The switching circuit according to Claim 15  
further comprising a decoding circuit for decoding the at  
least one control signal, said decoding circuit providing at  
least one selection signal for activating one of (said

In re Patent Application for:  
**GUINEA**  
Serial No. **Not yet assigned**  
Filing date: **Herewith**

---

plurality of circuits) based upon on a state of the at least one control signal.

17. The switching circuit according to Claim 16 wherein each of the input clock signals is of equal period.

18. The switching circuit according to Claim 17 wherein each of the input clock signals is delayed equally relative to one another by a fraction equal to the period divided by a number of (said plurality of circuits)

19. The switching circuit according to Claim 16 wherein each disabling signal comprises a pulse; and wherein each of (said plurality of circuits) generates its respective pulse based upon the at least one selection signal.

20. The switching circuit according to Claim 19 wherein each of (said plurality of circuits) provides an enabling signal for enabling the transmission of its respective input clock signal based upon the at least one selection signal, the enabling signal being activated synchronously with a trailing edge of the respective input clock signal.

21. The switching circuit according to Claim 20 wherein each of (said plurality of circuits) deactivates its respective enabling signal upon receiving the disabling signal.

(22) A switching circuit comprising:

In re Patent Application for:  
**GUINEA**  
Serial No. **Not yet assigned**  
Filing date: **Herewith**

---

AI  
CONT  
a plurality of circuits each receiving one of a plurality of input clock signals delayed relative to one another and a respective selection signal, one of said plurality of circuits selectively outputting its input clock signal as an output of the switching circuit based upon its selection signal;

each of said plurality of circuits selectively outputting its input clock signal synchronously with a transition of its input clock signal and before disabling a current output signal to substantially prevent the production of false signals during switching.

23. The switching circuit according to Claim 14 wherein said (plurality of circuits) are connected in a ring; and wherein each of (said plurality of circuits) provides a respective disabling signal to adjacent circuits in the ring upon being selected to disable said adjacent circuits.

24. The switching circuit according to Claim 22 wherein each of the input clock signals is of equal period.

25. The switching circuit according to Claim 24 wherein each of the input clock signals is delayed equally relative to one another by a fraction equal to the period divided by a number of said plurality of circuits.

26. The switching circuit according to Claim 23 wherein each disabling signal comprises a pulse; and wherein each of said plurality of circuits generates its respective pulse based upon its selection signal.

In re Patent Application for:  
**GUINEA**  
Serial No. **Not yet assigned**  
Filing date: **Herewith**

---

AI  
CONT  
27. The switching circuit according to Claim 26 wherein each of (said plurality of circuits) provides an enabling signal for enabling the transmission of its input clock signal based upon its selection signal, the enabling signal being activated synchronously with a trailing edge of the respective input clock signal.

28. The switching circuit according to Claim 27 wherein each of (said plurality of circuits) deactivates its respective enabling signal upon receiving the disabling signal.

29. A circuit for recovering data from a serial data flow comprising:

a generator<sup>24</sup> for generating a plurality of clock signals of equal period that are delayed equally relative to one another by a fraction equal to the period divided by a number of the plurality of clock signals;

a switching<sup>3</sup> circuit for receiving the plurality of clock signals and providing one of the clock signals as an output thereof;

a phase comparator<sup>1</sup> for receiving the output from said switching circuit and a data flow<sup>81c</sup> signal comprising a flow of data and providing at least one phase difference signal indicating a phase difference therebetween; and

a controller<sup>5</sup> for receiving the at least one phase difference signal from said phase comparator and controlling the switching<sup>3</sup> circuit based thereon to switch the output of said switching circuit to one of said clock signals providing a smaller phase difference than a current clock signal;

In re Patent Application for:  
**GUINEA**  
Serial No. **Not yet assigned**  
Filing date: **Herewith**

---

AI  
CONT  
said switching circuit providing the output  
synchronously with a transition of the output and before  
disabling a current output to substantially prevent the  
production of false signals during switching.

30. The circuit according to Claim 29 wherein said  
generator comprises a delay-locked loop circuit.

31. The circuit according to Claim 29 further  
comprising a data sampler receiving as inputs the data flow  
signal and the output of said switching circuit; and wherein  
the output of said switching circuit synchronizes sampling of  
the data flow signal by said data sampler.

32. A method for switching between a plurality of  
input clock signals delayed relative to one another  
comprising:

selecting a new signal from among the plurality of  
input clock signals based upon at least one control signal,  
the new signal being advanced or delayed relative to a current  
signal of the plurality of input signals currently selected;  
and

outputting the new signal synchronously with a  
transition of the new signal and before disabling the current  
signal to substantially prevent the production of false  
signals during switching.

33. The method according to Claim 32 wherein each  
of the input clock signals is of equal period.